

CHAPTER SEVEN

SAFETY

**BUREAU OF DESIGN AND ENVIRONMENT
SURVEY MANUAL**

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CHAPTER SEVEN

SAFETY

I. INTRODUCTION

The employees of the Illinois Department of Transportation survey in many different environments. Many of those are hazardous, such as: rugged terrain, high-speed traffic, tools used, construction equipment, poisonous vegetation and snake infested areas.

The objective of this chapter in the Surveying Manual is to help maintain maximum output of manpower, equipment and supplies by eliminating accidents resulting in lost time, personal injury, property damage and human suffering.

It shall be the duty of every employee to consider no job so important and no service so urgent that time cannot be taken to work and drive safely.

The violations of Department safety rules and practices have resulted in injury to employees, damage to Department equipment and lawsuits; therefore, the failure of supervisory and or non-supervisory employees to comply with safety rules and practices outlined in this chapter may result in disciplinary action.

II. PERSONNEL

A. CHIEF OF SURVEYS RESPONSIBILITIES

It shall be the responsibility of every Chief of Surveys to carry on the operation under their jurisdiction in such a manner as to provide safe conditions/practices for all employees and the public.

The Chief of Surveys should provide each new employee with a copy of this chapter of the Survey Manual and allow him/her time to read and study it. Be certain the employee understands the contents of this chapter. Each employee must understand the need for being responsible for his own safety and the safety of others.

The Chief of Surveys should have at least one person trained in first-aid on each survey crew. Assign other trained personnel to crews working on jobs that require hazardous tasks, such as: working in confined spaces, keeping highly allergic personnel away from

jobs where poison ivy, poison oak, or other toxic vegetation or substances cannot be avoided; or providing places where antivenin can be administered professionally for employees working in a high-snake-hazard area.

The Chief of Surveys shall monitor and immediately correct safety deficiencies that are seen or reported on job sites. They shall see that adequate safety equipment is stocked.

B. CREW CHIEF RESPONSIBILITIES

The Crew Chief has the responsibility to implement the department approved work methods and procedures to assure that all work is performed safely.

He/she should:

- see that a copy of this chapter on safety issues is always available to members of the crew. A copy should be kept in each survey vehicle.
- give safety a first priority when planning each survey.
- request enough personnel to allow for safe surveying practices to be followed.
- provide a buddy to the task to help insure the safety of the employee while working in hazardous areas, such as: around animals (wild or domestic), crossing fences, precipitous slopes or slippery rocks, working in venomous snake areas, and around power lines.
- make sure that the crew has the proper safety equipment available for their use.
- make sure the employees use the equipment as required.
- not let the employee work if an employee refuses to use the required equipment. If need be, report him/her to your supervisor.
- make certain that all equipment and supplies are safe to use. He/she shall make certain that all new employees have been fully trained in the safety issues covered in this chapter of the manual.

C. CREW MEMBER RESPONSIBILITIES

Every IDOT employee is responsible for his own safety and the safety of his co-workers.

During field operations the crewmember should:

- Report any unsafe conditions or practices.
- Promptly report all accidents, and personal injuries to his/her supervisor.
- Be alert for hidden hazards.
- Store and secure all equipment and supplies when not in use.
- Set aside defective and unsafe tools and supplies.
- Help in keeping all work areas clean, sanitary and litter free.

- Always face oncoming traffic when working on foot and near or on the traveled way.
- Each employee must provide proper footwear that provides protection and firm support for the foot and ankle. Steel toed shoes are recommended. Soft footwear shoes such as sneakers are forbidden. Wear clothing that will keep you from being injured, or diverted from safely performing the job at hand.
- Each employee shall wear a State issued soft reflective hat or hard hat, and a reflective vest whenever the situation calls for their use. See [Section IV, Item C, Personal Protection, page 7-6](#) for more details.

III. GENERAL SAFETY REQUIREMENTS

A. SAFE DRIVING PRACTICES

Employees are not exempt from traffic laws. Employees operating vehicles and mobile equipment shall obey all State and Local Traffic Laws and Department Policies, Rules and Regulations.

The number of employees permitted to ride in a car, truck or mobile equipment shall not exceed the seat space and seat belts as provided by the manufacturer.

Safety seat belts installed in vehicles and mobile equipment shall be used by the operator and passengers while the vehicle or mobile equipment is in use except for equipment/operations which require the operator to stand to safely perform the work. The operator shall not place the vehicle in motion until all occupants have properly secured their safety belts.

It is the operator's responsibility to report all vehicle and equipment malfunctions and defective parts.

The operator should always signal a turning movement or a lane change.

When it is necessary to stop a Department vehicle at locations where traffic does not normally stop, the employee shall give warning to following vehicles by flashing his brake lights and slowing down gradually.

In accordance with Departmental Order 11-2(3. A.5), "When a vehicle is driven to an employee's home overnight, the vehicle shall be parked off the street."

Should disabled equipment, either State or privately owned, be parked on the pavement without proper protection, it is the duty of employees to protect traffic by placing fusees, reflectors or torches. In the case of privately-owned vehicles, the matter should then be referred to the nearest police agency, your district radio room or Station 1 in the central office as soon as possible.

B. SAFE SURVEYING PRACTICES

Working on or near a pavement open to traffic requires advance signing and the placement of traffic control devices. Survey crews exposed to traffic hazards that cannot be addressed with existing traffic control plans, should discuss with the District Traffic Control Supervisor for special traffic and road conditions.

Surveying and measurements in the vicinity of power lines should be made with clean, dry, non-conductive instruments and non-metallic cloth tapes.

In snake-infested areas the survey crew should be familiar with the first aid treatment of snake bites and during survey planning determine the nearest medical facility where antivenin is available.

Pressurized spray cans stored in the passenger compartment of a vehicle must be placed in a container out of the direct sunlight.

C. ACCIDENT REPORTING

All accidents (including physical collapse) occurring in the course of employment involving Department personnel and/or equipment shall be reported as soon as possible to the office to which the employee is assigned.

Accidents which involve Department personnel and or equipment shall be reported on the proper forms within 24 hours after the occurrence.

- Vehicle accidents shall be reported on Form SR-1 (Motorist's Report of Illinois Vehicle Accident and OCC 1207 Accident Report). [See pages 7-24 and 7-25](#) for an example of SR-1 and [page 7-26](#) for an example of OCC 1207.
- Personal injuries shall be reported on Form OCC 1207 (Accident Report). [See page 7-26](#) for an example.

Failure to report vehicle or personal injury accidents to his/her supervisor may disqualify an employee from receiving Worker's Compensation Benefits.

The operator of a vehicle or mobile equipment operated at Department expense having been involved in an accident, shall immediately notify the nearest local police, sheriff department or state police and within one working day submit the following reports to the office to which the worker is assigned: Form SR-1 (Motorist's Report of Illinois Vehicle Accident) and Form OCC 1207 (Accident Report).

Incidents involving loss or damage to State equipment resulting from explosives, fire, theft, vandalism and storm shall be reported immediately to the Director, District Engineer or Bureau Chief.

Two or more copies of the following forms are to be carried in Department vehicles.

- "Motorist's Report of Illinois Vehicle Accident," (Form SR-1) [See pages 7-24 and 7-25](#). This form will normally be provided and completed by the police officer investigating the scene of the accident. Pages 7-24 and 7-25 are only an example. The printed form from the Division of Traffic Safety is the one required to be filled out.
- "Accident Report" (Form OCC 1207). Note: This form is to be completed for all injuries and vehicle accidents involving I. D. O. T. personnel, vehicles and/or mobile equipment. [See page 7-26](#).

IV. FIELD ACTIVITIES

A. PROPER HANDLING AND CARE OF HAND TOOLS

When working with chisels, star drills and/or wedges, the following shall be observed:

- Maintain a sharp cutting edge.
- Striking surface should not be mushroomed or have overhang (dress or replace).
- Use only tools that are free of cracks or checks.
- All employees required to face the work shall wear eye protection.
- Wood chisels shall have a tight handle and sharp cutting edge.

Handles, sockets and rivets of all shovels shall be smooth and securely fastened. Shovels shall never be used in place of a lever or pry bar.

Tools shall not be left lying where employees are likely to trip or fall over them.

Tools shall be used only for their intended purpose.

Faulty, damaged or broken tools shall be kept separately until repaired or properly disposed of in accordance with Department policy.

Axes, hammers, picks and sledges shall have tight and securely wedged smooth straight-grained handles. All such tools with battered, mushroomed or cracked striking faces or taped handles shall not be used.

Power tools shall not be left running while unattended.

Proper spacing of workers shall be maintained at all times; especially when using hand tools, since it is not uncommon for workers to be injured by a tool in the hands of a fellow worker.

Do not operate any equipment until all protective guards are in place and functioning properly.

Employees engaged in cutting vegetation with hand scythes, sickles, weed eaters, machetes and brush hooks shall be spaced at a distance that will prevent fellow employees from being struck by such tools.

Eye protection is to be worn while clearing the sight line through vegetation.

B. CONFINED SPACES

Before workers are allowed to enter manhole structures or confined spaces, the structure/space shall first be tested for flammable and non-flammable gases, oxygen concentrations and toxic vapors. The tests results shall be used to determine ventilation and respiratory protection requirements. Sound testing procedures must be utilized.

[See Appendix – D](#) of this manual for a complete copy of the (CONFINED SPACE POLICY).

C. PERSONAL PROTECTION

All employees engaged in ground level field activities on or within 15 feet of a pavement open to traffic, shall wear high visibility (orange or strong yellow-green) vests or

approved high-visibility outer garments. Flaggers and survey personnel who are working on the pavement shall wear high-visibility hats and vests at all times.

All employees are required to wear hard hats/caps or a high-visibility orange cap when engaged in field activities within 15 feet of a pavement open to traffic, when not in vehicles or self propelled mobile equipment.

Hard Hats/Caps: All supervisors are mandated to wear and require their employees to wear protective hard hats/caps when they are in an area where there is a potential for injury from falling, moving, swinging, or flying objects. Some work areas where hard hats/caps must be worn include the following:

- when under equipment or structures,
- when around loose materials,
- when around a boom truck, crane, telescoping boom, end loader, backhoe, coring or drilling rigs, or other equipment,
- when around tree trimming and removal operations,
- when around breaking or drilling pavement operations,
- when installing or repairing traffic signs, signals and post,
- when in areas where there is a chance of being struck by flying objects.

Note: This list is not intended to be all inclusive; if there is any doubt, wear a hard hat/cap.

High Visibility Soft Headgear: High visibility (orange or strong yellow-green) soft headgear is to be worn by employees when they are engaged in continuous activities located within 15 feet of a pavement of active highway construction work and when not covered in the hard hat/cap requirements.

Some work areas where high visibility soft headgear should be worn include the following:

- when performing field reviews for planning and design functions,
- when working as a flagger,
- when working on survey crews,
- when performing pavement condition surveys.

Note: This list is not intended to be all inclusive.

Eye protection shall be worn by surveying crews when working in vegetation or brush more than waist high.

Employees working in areas of dense vegetation should avail themselves of insect repellent.

D. WATER OPERATIONS

When two or more employees are working on or out of watercraft, a U. S. Coast Guard approved personal floatation device shall be readily available for each person on board.

If an employee is working alone on or out of watercraft, or if an employee aboard a watercraft cannot swim, a U. S. Coast Guard approved personal floatation device shall be worn at all times while on board.

A U. S. Coast Guard approved floatation throwing device shall be readily available where the possibility of drowning exist during waterway operations when employees are working on, over or within 5 feet of the rivers, lakes, streams or other watercourses of the state, regardless of the presence of other structural protection devices between the employee and the water.

If an employee is working alone on waterway operations where the possibility of drowning exist, or if an employee working on such operations cannot swim, and there is no structural protection device between the employee and the water, a U. S. Coast Guard approved personal floatation device shall be worn.

E. TRUCK USE AND HANDLING

Personnel riding on the outside of equipment is prohibited except where provision is made for the operator or others while performing an operation for which the equipment is designed.

Do not mount or dismount moving vehicles or equipment.

To prevent backing accidents:

- Select parking locations to eliminate backing maneuvers.
- Avoid long backing movements.

Operators shall not operate vehicles or mobile equipment in reverse unless they are certain the backing movement can be made safely. When vision to the rear is limited and a fellow employee is available, that employee shall be utilized by the operator to assist with the backing movement. The person assisting the operator shall take a position outside the vehicle so as not to be exposed to oncoming traffic or the backing vehicle. If help is not available, the operator shall go to the rear of the vehicle and visually check the area behind the vehicle before operating the vehicle in a backward movement.

When travelling in traffic, do not operate the vehicle at such a slow rate of speed as to cause an accumulation of other vehicles behind. If a slow rate of speed is unavoidable, occasionally pull off the road and wait in order that traffic may clear.

Do not stand on or within two feet of an open traffic lane to talk with the driver of a vehicle parked on the road shoulder.

A truck may be operated with the end-gate or liftgate in the open or horizontal position only when necessary for load or work situations.

When stopped or parked on the shoulder, as much clearance as possible shall be maintained between the edge of the pavement and the near side of the vehicle. The strobe light shall be used.

All vehicles, equipment, workers (except flaggers) and their activities are restricted at all times to one side of the pavement unless otherwise authorized. Avoid stopping on the shoulder across the roadway from another vehicle and/or operation.

Fusees are effective for emergency warning at accident scenes and other hazardous locations. Those who do use fusees, must be aware of the following:

- Fusees have a limited burning time: therefore, if an emergency exists beyond the burning time of the fusees, additional fusees must be set or other warning devices, such as, emergency reflectors shall be used.
- The molten sulfur from a burning fusee can burn through a heavy leather shoe; therefore, extreme care must be taken when handling a lit fusee.
- To minimize the possibility of fire and /or explosion, never place lit fusees near the vehicles at an accident scene.

Strobe warning lights on vehicles so equipped must be used during the following operations.

- when performing slow moving operations.
- when temporarily stopped on roadway surface or shoulder
- during an emergency operation.

Select parking locations for Department vehicles and equipment that will not hide traffic signs and signals.

All trucks shall have the proper lights and reflectors, in accordance with ICC Regulations and Department Policy.

All trucks shall have the proper emergency warning kits, in addition to four fusees, which must be maintained in a serviceable condition for emergency use.

V. TEMPORARY TRAFFIC CONTROL

Definition: Temporary traffic control for surveys consists of using portable warning/control devices for a short period of time to provide safe working conditions for the surveyors and the motoring public. The time period has a duration of one work shift or less. Whenever possible, work should be conducted without any intrusion into a travel lane or within 2 feet of a travel lane. For work on shoulders that must intrude upon the above area, signs, protective vehicles and/or flaggers may be required.

A. GENERAL

Safety: The protection of employees and the public shall be the primary consideration when temporary traffic control measures are used.

Interference with Traffic: All reasonable measures shall be used to preclude interference with vehicular movement. Lane closures and roadbed closures shall not be considered until all other alternatives have been exhausted.

When to Use: Temporary control measures shall be used whenever surveyors work on or within 15 feet of the pavement edge.

Duration of Control Usage: Temporary control devices shall not be in place and functional any longer than necessary.

Purpose: Temporary traffic controls are used to establish a “working area-of-protection” for employees.

Peak Hours: On heavily traveled roads, surveys should be scheduled only during off-peak hours.

Offset Procedures: Offset surveying procedures should be used whenever appropriate. Actual time on the traveled portion of the roadway should be kept to a minimum.

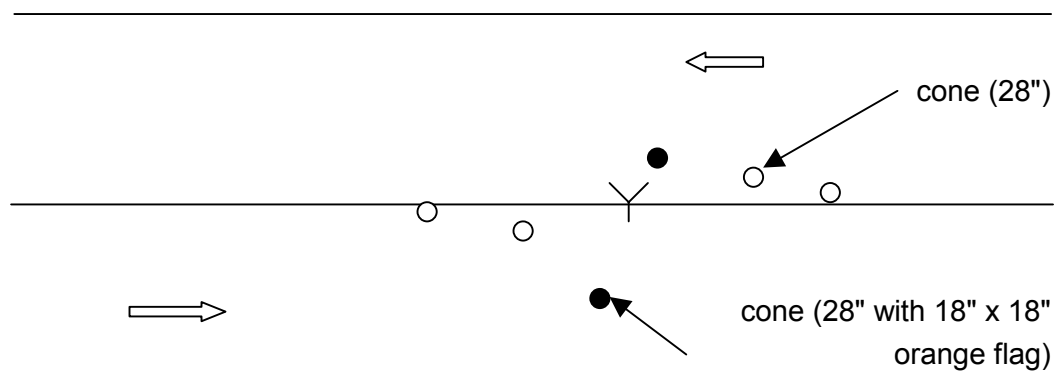
Flagger Assistance: A crew member who is sighting or reading the instrument, or performing other operations on the pavement, should be assisted by a flagger or other crew member so he may be promptly warned of approaching traffic.

Lane Changes/Stops: If traffic is required to change lanes or stop, a flagger will be required. Attempts to direct traffic should only be done by a flagger, with flagger warning signs in place.

Sign Usage: Signs shall be used at all times when working on or within 2 feet of the pavement edge for a period of time in excess of 15 minutes.

High Visibility Vest: All crew members on pavement or within 15 feet of the pavement edge shall wear high-visibility (orange or strong yellow-green) vests.

Any unattended equipment, such as a theodolite or tripod supported range pole on the pavement centerline, shall be protected by cones as shown on the sketch below.



Night work or work on city streets with high volumes of traffic requires special protection. Law enforcement agencies should be contacted for assistance when the need is apparent.

B. INDIVIDUAL SAFETY

The safety of a surveyor often rests on that employee's own shoulders. Whenever feasible, each employee must obey the basic rule of facing traffic at all times. However, when working around traffic this is not always possible for surveyors.

If a surveyor can not work facing traffic, the procedure should be changed or the order of work revised.

If this can not be done, then the exposed employee should be provided with a "lookout" who will serve as eyes for the vulnerable surveyor.

C. SHORT TERM ENCROACHMENTS ON PAVEMENT WITH ADEQUATE SITE DISTANCE

Short term encroachments on the pavement may be performed without a flagger, provided all vehicles are completely off the traveled lanes and as far off the edge of the pavement as practical and the following conditions are met:

- Each task must be performed with extreme care.
- The amount of time the surveyor is on the pavement shall be minimized.
- The surveyor shall enter onto the pavement only during appropriate gaps in the traffic.
- When possible, work on the same side of the road as the vehicle.
- The surveyor shall wear a high visibility vest (orange or strong yellow-green) or approved high visibility outerwear and hat.
- The survey vehicle shall have its strobe light on.
- On multi-lane roadways, drive on the shoulder at slow speeds with strobe lights on.

If the surveyor must remain in the traffic lane and appropriate gaps do not exist, the lane must be closed with proper traffic control signs and devices. This provision does not apply when the survey crew works with an instrument on the pavement.

D. WORKSITE PROTECTION

Advanced Warning Signs: Warning signs shall be used whenever it is necessary for survey personnel to cross or enter a traveled lane unless entry into the travel lane is a short term encroachment. They are diamond shaped panels with the words SURVEY CREW in black letters on a fluorescent orange reflective background. All warning signs and devices should be placed in accordance with

Part VI of the "Manual on Uniform Traffic Control Devices for Streets and Highways".

Standard warning signs reading "SURVEY CREW" should be placed before work starts. They shall be a minimum of 48 inches by 48 inches. They should be placed approximately 1500 feet in advance of the work area in a position where they are readily visible to approaching traffic. If a series of advance warning signs are needed they should be placed approximately 500 feet from the point of restriction with additional signs at 500 foot intervals.

On rural highways the signs should be placed on the shoulder from 2 feet to 10 feet outside the traveled lane. On urban streets the sign should be placed at least 2 feet behind the back of the curb and be readily visible by the motorist. In the case of divided highways, supplementary signs should be placed on the median for observation by motorist in the inner lane. In all cases, signs mounted on portable stands shall be no less than 12 inches above the travel way.

When two-way traffic is involved, signs should be provided for traffic from both directions.

To be effective, the signs should be placed not closer to the survey area than 500 feet for traffic speeds up to 45 miles per hour and 800 feet for traffic speeds of 45 miles per hour or more. If signs are placed too far in advance, their warning value may be lost. When surveying in rural locations, the signs should be moved ahead when the survey work area moves the length of ½ day's planned operation. When the survey area extends over a distance of ½ mile or more, additional warning signs or the use of cones may be needed.

Work within 15 feet of a lane open to traffic that exceeds 15 minutes shall include warning signs.

It is the responsibility of the employee in charge to ensure that a high visibility orange flag is displayed on all single warning signs and on at least the first of a series of warning signs.

For the protection of the working crew and traveling public do not use signs that are so badly defaced that the legibility is affected. Poorly maintained signs are ineffective and may contribute to accidents. Request new signs as needed.

Traffic Cones: Each survey crew should have at least eight 28" cones. They should be used in addition to the advance warning signs. They should be arranged to define the survey area and safely divert traffic around the work zone. Tapers should be 10:1 or flatter and should be closely spaced to prevent traffic from entering the survey work area.

Flaggers: Surveyors working on pavements open to traffic require constant vigilance. Within each survey crew, at least one member should be trained as a flagger. It is preferable for all members to have received flagger training.

Flaggers must be courteous to all motorists. Be courteous even to those that want to argue and those who will not obey signs and devices. A flagger should be capable of favorably impressing the public and gaining its cooperation.

The flagger shall:

- be stationed at least 100 feet from the work site and workers at a location affording good visibility and should stand at the side of the lane where the traffic is to stop.
- be stationed so they can be seen at least 500 feet by oncoming traffic.
- hold the octagon shaped stop/slow paddle in an upright position with the STOP side facing the lane of traffic to be stopped.
- hold the octagon shaped stop/slow paddle with the SLOW side facing the lane of traffic when the traffic is to proceed through the survey area at a slow rate of speed. Traffic control at multilane closures, urban areas and other operations that require special consideration, are to be established in accordance with the Department's "Flaggers' Handbook".
- be stationed away from the survey equipment on the shoulder of the road facing approaching traffic in the lane "CLOSED" due to the survey activity. The flagger should not attempt to stop traffic by standing on the pavement unless standing inside a coned or barricaded area. On a two-lane highway, vehicles approaching in the "CLOSED" lane are required to yield to traffic in the "OPEN" lane unless opposing traffic has been stopped by another flagger. When opposing traffic is observed and closed lane vehicles are stopped, move to a conspicuous position near the centerline so as to be readily seen by approaching drivers. Check the "OPEN"

traffic lane (or with the other flagger) to determine traffic conditions. Never turn you back to traffic approaching in the lane under your control. Once an opposing vehicle has passed and you have determined the way to be clear, move toward the shoulder, turn you sign to "SLOW" and motion stopped vehicles to proceed. As a flagger you have a responsibility for the safe passage of traffic at work areas. Your judgement must be keen and alert at all times, ready to warn traffic and crew of any danger.

- be stationed at effective locations other than the open traffic lane.
- always be alert for oncoming traffic and not turn their back on traffic in the lane under control.
- be replaced at appropriate intervals to avoid fatigue.

It shall be the duty of the flagger to warn the workers of danger; should the driver of a vehicle fail to heed the flagger's signals.

Work conducted within the travel lanes of a highway or street that requires motorists to change lanes or stop shall be conducted with one or more flaggers.

Special situations, such as hills, curves and bridges may warrant multiple flaggers and portable radios as directed by the supervisor.

Flaggers shall be equipped with and required to wear or use the following:

- High visibility vests and headgear (reflectorized for night work).
- Safety glasses.
- Flagger traffic control signs (Stop/Slow Paddle).
- For night operations, a red lantern or flashlight with a red wand shall be used. (Note: The flagger station shall be illuminated.)

When a motorists refuses to obey instructions, record the vehicle's license plate number and time of day. Report the incident and its particulars to your immediate supervisor.

Lookouts: The safety of IDOT surveyors is often jeopardized by moving vehicles or equipment. At times the duties of the personnel or other conditions preclude employees looking out adequately for themselves. In such cases lookouts are to be used. Survey work shall not begin until required lookouts are in place.

Definition: A lookout is an employee whose sole duty is to provide immediate warning to co-workers of vehicle or equipment which have become imminent hazards to their safety.

All employees should school themselves to act as intermittent lookouts whenever their primary tasks afford "open spaces" for doing so. Flaggers should be equipped and prepared to function as lookouts whenever motorists fail to heed directions given.

The need for lookouts can be dictated by one or more factors for a given survey, a given survey operation, or a particular situation. Common factors which influence usage of lookouts are:

- Location of instrument setups
- Type of highway
- Vertical alignment
- Horizontal alignment
- Traffic volume
- Prevailing speeds
- Type of survey
- Traffic controls used
- Construction activity
- Proximity to actively used railroad tracks
- Vegetation, relief roadway geometrics and other condition which restrict sight distance.

E. EQUIPMENT

Safety devices to use for temporary traffic control are:

Signs: These include those supported on temporary sign supports, on vehicles, or the hand held "SLOW/STOP" paddles. Each survey crew should have two 48 inch "Survey Crew" signs.

Warning flags: At least one flagman ahead sign should be carried in a survey vehicle.

Traffic cones: Each crew should have at least eight 28" cones.

Personal Safety Equipment: Each crew member should have a hard hat and safety vest.

Survey Vehicles: Survey trucks should have a top mounted rotating/flashing amber light and mounted strobe lights.

F. PLACEMENT OF SIGNS AND CONES AND FLAGGERS

For the detailed drawings of the proper placement of signs, cones and flaggers for particular situations when working on or near the pavement, see the February, 2001, Issue #6A or later version of Supplement to the Work Site Protection Manual published by the department. Diagrams for various situations are provided in the booklet. Every survey vehicle should have one or more copies of the Work Site Protection Manual.

G. REMOVAL OF CONTROL DEVICES

Immediately remove devices and signs when protection is no longer needed.

During prolonged work breaks (such as lunch), do one of the following: remove devices, cover their messages, fold fabric signs or turn them away from traffic. If signs are left up when workers are not visible, drivers tend to consider signing as meaningless and unwarranted and begin to ignore the warnings. Note: do not take breaks during any lane closures unless sufficient personnel are available to allow staggered individual breaks.

H. CLOSURES

Occasionally a survey will require a shoulder closure on a freeway or expressway in a high-volume, urban area or a stationary lane closure on a freeway or expressway.

Shoulder closure: Surveys along shoulders of freeways, expressways, and conventional roads require as much safety consideration as when surveying on the traveled way of these facilities.

The responsibility for the decision to close a shoulder for a survey should be made by the Chief of Surveys.

Shoulder closures shall be considered in the following situations:

- **Parking on Shoulder** – When a vehicle must be parked on a shoulder within 6 feet of traffic for more than 30 minutes, close the shoulder if an impact of the survey vehicle by an adverse vehicle might result in injury to crew personnel. When you park a vehicle on a shoulder, a taper of three or more cones should be set behind the vehicle.
- **Surveying on the Shoulder** – Close the shoulder when a survey must be on or along the shoulder and the survey itself will take longer than the time required for control set-up and retrieval. A shoulder closure shall be carefully considered when surveyors must work within 6 feet of traffic.

Surveys that require shoulder closures should be performed only during full daylight hours, and preferably during off-peak hours.

The Chief of Surveys shall decide if survey personnel are to make a particular closure. Shoulder closures on high-volume urban freeways and expressways shall be made only by the Bureau of Operations, unless the closure is short and survey personnel are trained and equipped to set the closure.

I. STATIONARY LANE CLOSURES

Today's surveying equipment and techniques usually make lane closures unnecessary. Use these guidelines if closures are considered.

A lane closure needs to be approved by the Chief of Surveys.

If possible only "take" the required free space needed to perform the survey but do not reduce the lane's width to less than 10 feet between the cones and the edge of the adjacent lane.

Surveys that require lane closures should be performed in full daylight, and during off peak hours.

On freeways and expressways lane closures shall be made only by the Bureau of Operations.

For typical sign and cone installation for lane closures, space cones at 25 foot intervals at any stationary work site, such as an instrument set-up, to round off the traffic channel and to clearly define the work area.

J. CENTERLINE SURVEYS

Occasionally surveyors must establish and station the centerline of a conventional road. Often the centerline is established for use as a base line for gathering engineering and lane survey data or for construction staking.

For safety reasons, centerline surveys shall not be considered until all logical alternatives have been rejected. A centerline survey can be necessitated by one or more of these factors:

Roadbed geometrics: Roadbed geometrics which may preclude establishment of an offset line are:

- steep cut and fill slopes
- narrow shoulders
- alignment

Topography: Natural impediments such as boulders, brush, and trees may preclude establishment of an offset line.

Type of survey: The type of survey may preclude the establishment of an offset line.

Land Surveys: May need to establish the centerline for determining property ties and staking Right-of-Way.

Engineering Surveys: The stationing of the centerline can be required for engineering planning, studies, and design of:

- Truck passing lanes.
- Channelization.
- Alignment correction, horizontal and vertical.
- Pavement rehabilitation.
- Left turn lanes.

A lane closure is considered as the ultimate inconvenience for motorists. Therefore, it might be the least desirable action necessary to enable a centerline survey. Closures are to be made upon the recommendation of the Chief of Surveys.

Every reasonable effort will be made to mitigate adverse effects on the flow of traffic. Such efforts will include scheduling work at optimum times.

K. STROBE WARNING LIGHTS AND EMERGENCY FLASHING LIGHTS

K.1 General

Strobe Warning Lights: Strobe lights are installed by IDOT as supplements to the manufacturer's standard equipment. Whenever vehicles are located on or within 15 feet of the pavement edge, mounted strobe lights shall be utilized. This includes all vehicles parked on the shoulder.

Emergency Flashing Lights: Factory installed flashing lights which are included as standard equipment by the manufacturer on all cars, vans and pickups and most other highway vehicles.

Vehicle Code: Illinois Vehicle Code allows vehicles used by highway authorities to display amber warning lights when such vehicles are parked or working on the highway.

Basic Policy: Strobe warning lights shall be used only to protect employees and equipment or to alert the public of a potentially hazardous highway condition.

Responsibility: Within the framework of the policy and the guidelines in this Section, each Chief of Surveys shall:

- Determine and approve the surveying vehicles to be equipped with strobe warning lights.
- Ensure that all operators of such vehicles know of this policy and these guidelines and comply with them.

Requesting and Installation: Strobe warning lights may be acquired through your District Office or Central Bureau and installed by the highway garage.

K.2 Guidelines for Use

These instructions are not intended to cover all possible criteria for using strobe warning lights or emergency flashing lights. Field personnel have the leeway to use good judgement for their own protection as well as that of the public.

K.2.1 Daytime Use

Strobe warning lights shall be used:

- When a vehicle is parked in the median without any lane closure. This should be for short periods only.
- When a vehicle is parked on the right shoulder and work is being performed in the immediate vicinity of the vehicle. In this case, "immediate vicinity" means in such a location as to expose the worker(s) to traffic. Under certain conditions it might be necessary to establish a shoulder closure.
- When a vehicle is slowing in preparation to move onto the shoulder, into the median, or into a lane closure. Or, it is accelerating to move from the shoulder, median or lane closure into traffic.
- When other highway conditions exist which, in the operators opinion, warrant use of amber warning lights to protect workers and/or the public.

Emergency flashing lights shall be used:

- When the vehicle is parked on the right shoulder during periods of restricted visibility; for example, at night or when it is foggy.
- When the vehicle is parked within an established lane closure.
- When the vehicle is moving within an established lane closure.

K.2.2 Nighttime Use.

Surveyors seldom work at night. However, survey personnel might be required to work at night on certain occasions. Those employees should be aware of these guidelines.

Amber strobe warning lights shall be used:

- While driving in a closed lane.
- While temporarily parked in a closed lane.

Emergency flashing lights shall be used:

- While driving in a closed lane.
- While temporarily parked in a closed lane.

When not to Use Amber Strobe Warning Lights:

- When exposure to accident to the employee or to motorists does not exist.
- When the vehicle is traveling at normal highway speeds.
- As a substitute for flashing arrow signs.
- As a substitute for moving the vehicle to a safe position where use of amber warning lights would not be required.

K.2.3 Additional Considerations

Shielding Lights: At times, amber warning lights are needed only on one side of a divided highway with the median barrier. Consider shielding the amber warning lights to prevent it from distracting or confusing motorists on the other side of the median barrier.

Passing on Shoulders: In emergencies, it might be necessary to travel on the shoulder to bypass traffic. In this case use all three lights, headlights, emergency flashing lights, and amber warning lights. This procedure shall be a “last resort” operation for surveyors.

Used with other devices: Where appropriate, coordinate the use of warning lights with other safety equipment and techniques. Do this for the broadest possible protection of employees and the public. See other topics in this section for guidelines.

Proper Usage: Be discriminatory in the use of amber warning lights. Improper usage could be hazardous to employees or the public, and thus be self-defeating. In addition, unnecessary usage might result in the public ignoring the device when it is needed.

REFERENCES:

EMPLOYEE SAFETY CODE by the Illinois Department of Transportation.

FLAGGER'S HANDBOOK by the Illinois Department of Transportation.

WORK SITE PROTECTION MANUAL, ISSUE #6A by the Illinois Department of Transportation.

SURVEY MANUAL by the Ohio Department of Transportation, dated May 1995.

COMPLETE BOTH SIDES OF THIS FORM

Use black ink

ILLINOIS MOTORIST REPORT

Mail This Report to
Illinois Department of Transportation
Accident Records Section
3215 Executive Park Drive
Springfield, Illinois 62766-0001

For a copy of the Police
Report contact the
investigating agency.

INVESTIGATED BY		TYPE OF REPORT <input type="checkbox"/> ON-SCENE <input type="checkbox"/> NOT ON-SCENE <input type="checkbox"/> SUPPLEMENTARY		<input type="checkbox"/> A No Injury / Drive Away <input type="checkbox"/> B Injury and / or Tow Due To Crash		AGENCY CRASH REPORT NO.	
ADDRESS NO. (OPTIONAL)		POLICE		CITY/TOWNSHIP (CIRCLE)		INTERSECTION RELATED PRIVATE PROPERTY HIT & RUN YES <input type="checkbox"/> NO <input type="checkbox"/>	
HIGHWAY or STREET NAME		COUNTY		MAKE		MODEL	
(CIRCLE) FT / MI N E S W AT INTERSECTION WITH		(NAME OF INTERSECTION OR ROAD FEATURE)		DATE OF BIRTH mo day yr SEX SAFT AIR		YEAR	
NAME (LAST, FIRST, M.I.) DRIVER <input type="checkbox"/> PED <input type="checkbox"/> EQU <input type="checkbox"/> NMV <input type="checkbox"/> INV <input type="checkbox"/>		STATE		INJURY		ELECT	
STREET ADDRESS		CITY		STATE		ZIP	
TELEPHONE		DRIVER LICENSE NO.		CLASS		VEHICLE OWNER (LAST, FIRST M.I.)	
TAKEN TO		EMS AGENCY		OWNER ADDRESS (street, city, state, zip)		POLICY NO.	
NAME (LAST, FIRST, M.I.) DRIVER <input type="checkbox"/> PED <input type="checkbox"/> EQU <input type="checkbox"/> NMV <input type="checkbox"/> INV <input type="checkbox"/>		DATE OF BIRTH mo day yr SEX SAFT AIR		YEAR		MODEL	
STREET ADDRESS		CITY		STATE		ZIP	
TELEPHONE		DRIVER LICENSE NO.		CLASS		VEHICLE OWNER (LAST, FIRST M.I.)	
TAKEN TO		EMS AGENCY		OWNER ADDRESS (street, city, state, zip)		POLICY NO.	
YOUR INSURANCE If you fail to give full information below, it will be assumed that you do not have sufficient liability insurance, and you may be subject to further application of the Safety Responsibility Law. Were you covered by a liability insurance policy at the time of the crash? YES <input type="checkbox"/> NO <input type="checkbox"/> Full name of your insurance company (not agency) which issues policy to cover liability for damages or injury to others: _____							
Name and address of representative who sold policy: _____							
Policy Number: _____							
Policy Period: _____ From: _____ To: _____							
Name of Policy Holder: _____							

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SR 1B 100M (REV. 1/95) IL 494-0734

Mail This Report to
Illinois Department of Transportation
Accident Records Section
3215 Executive Park Drive
Springfield, Illinois 62766-0001

Was driver (owner) of other vehicle insured? YES ☐ NO ☐ NOT KNOWN ☐
Were you driving a vehicle owned by your employer, in the course of your employment? If yes, check square. ☐
DID POLICE OFFICER INVESTIGATE ACCIDENT? YES ☐ NO ☐ APPROXIMATE COST TO REPAIR YOUR VEHICLE \$ _____
LIST PERSONS KILLED OR INJURED UNIT AGE SEX ADDRESS
DESCRIBE INJURIES
NAME
DESCRIBE INJURIES
NAME
DESCRIBE INJURIES
DESCRIBE DAMAGE TO PROPERTY OTHER THAN MOTOR VEHICLES
APPROXIMATE COST TO REPAIR
PROPERTY OWNER'S NAME
PROPERTY OWNER'S ADDRESS
\$ _____
SIGN HERE ADDRESS DATE



DIAGRAM WHAT HAPPENED INSTRUCTIONS

3. Use solid line to show path before crash:



dotted line after crash:



4. Show pedestrian by:
5. Show railroad by:
6. Show utility poles by:
7. Show motorcycle by:

1. Follow dotted lines to draw outline of roadway at place of crash.

2. Number each vehicle and show direction of travel by arrow.



INDICATE NORTH BY ARROW

THE PROVIDING OF FALSE INFORMATION IS A CLASS C MISDEMEANOR AND CAN RESULT IN A \$500 FINE AND A 30-DAY SENTENCE.

The Safety Responsibility Law

(See Sections 625 ILCS 5/7-100 through 5/7-216 of the Illinois Vehicle Code for complete statute.)

In certain cases drivers and owners may be required to prove financial responsibility, usually by presenting evidence of automobile liability insurance.

When any person sustains property damage in excess of \$500 or personal injuries, the names of uninsured motorists are sent to the Secretary of State with a legal notice of possible security deposit. The notice names all potential property damage and bodily injury claimants, and lists the evaluated amounts of those potential claims. The evaluations are based on information shown in the reports filed by drivers or owners. It is important that reports be filed promptly and that complete and accurate descriptions of property damage and bodily injuries be shown in the spaces provided on the report form.

The accident file, which usually contains a police report and a report from each driver, will be sent to the Secretary of State. That office will review the reports to ascertain if the uninsured driver was legally at fault. If the driver was clearly not at fault, the file will be closed; otherwise a Notice of Suspension will be mailed. The Notice of Suspension outlines the Methods of Compliance with the Illinois Safety Responsibility Law. It also advises the uninsured motorist of the right within 15 days of the Notice of Suspension to request a hearing. If a request for hearing is not received, the suspension becomes effective 45 days from the date of the Notice of Suspension. If a hearing is held and the Hearing Officer concludes, after considering all written and oral evidence, that there is a reasonable possibility of legal fault, the uninsured motorist has the following options: 1. Deposit security; 2. Present evidence of releases from liability (or signed agreements to pay for damages in installments) from all potential claimants named on the security deposit notice; 3. Show evidence of a final adjudication of nonliability. If the uninsured motorist fails to comply with any of the above options, his/her drivers license (if driver) and vehicle registration privileges (if owner) would be suspended.

(None of the above affects any person's right to sue to recover damages.)
(Security deposits, releases, or installment agreements are to be submitted to the Secretary of State.)

THIS SPACE FOR FLEET OPERATORS ONLY

If your vehicle operated in compliance with the Federal "Motor Carrier's Act," show the Interstate Commerce Commission docket number:

Is a Form SR-23 on file with the Department of Transportation covering your vehicle?

☐ YES ☐ NO

Has the Department of Insurance issued a certificate of self-insurance covering your vehicle?

☐ YES ☐ NO

LEGAL REQUIREMENTS

The driver of any motor vehicle involved in a crash which results in injury, death, or damage to any person's property in excess of \$500 must complete this report within 10 days after the crash. If the driver is physically incapable of completing the report, the owner or another occupant of the vehicle should do so.

INSTRUCTIONS

OBSERVE THE FOLLOWING RULES:

1. PRINT ALL NAMES AND ADDRESSES.
2. Answer all questions to the best of your knowledge. If unable to answer any questions, mark "NK" for "not known."
3. The nature and extent of all damages and injuries must be clearly and completely stated. Whenever a doctor's statement of injuries or a garage estimate of the cost of repairs is immediately available, give this information; otherwise, give your own careful estimate.
4. Use a second report form or a sheet of paper the same size to report additional vehicles, injured persons, witnesses, or any other information for which there is not sufficient space.
5. SIGN THE REPORT in the space at the bottom of the front side of this report form.
Important: This crash should also be reported to your insurance representative. Failure to report may jeopardize your automobile liability insurance.

DIAGRAM

NARRATIVE (Refer to vehicle by Unit No.)



A. Employee Report

Employee Name			File No.		
Address			Monthly Salary		
Social Security No.		Telephone #: Home		Work	
District	Office / Bureau			Yard	
Were you injured? Yes <input type="checkbox"/> No <input type="checkbox"/>		Date of Accident		Time	
Describe in detail the incident that resulted in your work related accident or injury:					
What duties were you performing at the time of your accident?					
Give names of any witnesses to this accident					
1.		2.		3.	
Did you report this injury to your supervisor? Yes <input type="checkbox"/> No <input type="checkbox"/>		Date		Name of your supervisor	
Have you received medical treatment? Yes <input type="checkbox"/> No <input type="checkbox"/>		Name of Doctor or Medical Facility			
The above is true and correct to the best of my knowledge					
Signature of Employee				Date	

If Incident Involved a Vehicle or Equipment, Complete the Following:

Employee Driver	Employee in Charge
Vehicle or Equipment Number(s)	Was there damage to the vehicle or equipment? Yes <input type="checkbox"/> No <input type="checkbox"/>
Amount of Damage	

B. Supervisor Report (To be completed for all incidents)

Name of Supervisor		Job Title	
Date the injury or accident was reported to you	Did you investigate to verify the cause of the injury or accident? Yes <input type="checkbox"/> No <input type="checkbox"/>		
If no investigation was made, please explain			
Did the accident or injury occur while the employee was performing his/her assigned duties? Yes <input type="checkbox"/> No <input type="checkbox"/>			
Was alcohol, "horseplay" or other misbehavior involved? Yes <input type="checkbox"/> No <input type="checkbox"/>		Would witness statements be helpful in evaluating this claim? Yes <input type="checkbox"/> No <input type="checkbox"/>	
Were any safety codes violated? Yes <input type="checkbox"/> No <input type="checkbox"/>		If yes, please explain	
What action has been taken with the employee or others to minimize recurrence?			
Supervisor's Signature			Date
Next Higher Level Supervisor		Job Title	Date Advised of Injury
Date Sent to District Worker's Compensation Office		Date Received by District Worker's Compensation Office	

This form must be completed entirely in order to process an injury or accident claim.